

**REMARKS**

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 1-2, 7-8 and 11-17 are currently pending in this application. Claims 20-21 have been cancelled. No new matter has been added by way of the present amendment. The amendment to claim 1 is supported by the Specification at, for example, page 11, lines 15-21. Accordingly, no new matter has been added.

In view of the amendments and remarks herein, Applicants respectfully request that the Examiner withdraw all outstanding rejections and allow the currently pending claims.

**Issues Under 35 U.S.C. 103(a)**

**Claims 1, 2, 7, 8 and 12-17**

Claims 1, 2, 7, 8 and 12-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Vreeland '001 or '457 (USP 5,541,001; USP 5,571,457) or Gloyer '576 (U.S. 2001/0046576) each in view of Barksby '445 (U.S. Patent 6,420,445) and Knobel '669 (USP 5,110,669) and further in view of Wen '897 or '639 (USP 6,077,897 or USP 6,159,639) or Sandlin '451 (USP 6,093,451) or Noh '002 (U.S. 2002/0042002) and further in view of Eichorst '630 (USP 5,827,630). Applicants respectfully traverse.

The Examiner asserts that the primary references (Vreeland '001 or '457 and Gloyer '576) disclose rollers comprising an electrically conductive polyurethane coating, wherein the polyurethane coating is derived from a polyol free of unsaturation and contains a conductivity or charge control agent such as an organometallic salt. The Examiner acknowledges that the cited references fail to teach or suggest the presently claimed polyether polyol having the claimed

degree of unsaturation. The Examiner further acknowledges that the primary references fail to teach or suggest the presently claimed fluoroalkyl sulfonic acid salt and imide salt. Moreover, the Examiner acknowledges that the cited primary references fail to teach or suggest a hydrotalcite or zeolite component. The Examiner relies on the teachings of Barksby '445, Knobel '669, Wen '897, Wen '639, Sandlin '451, Noh '002 and Eichorst '630 to overcome these deficiencies.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Additionally, there must be a reason why one of ordinary skill in the art would modify the reference or combine reference teachings to obtain the invention. A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int'l Co. v Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007). There must be a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* The Supreme Court of the United States has recently held that the "teaching, suggestion, motivation test" is a valid test for obviousness, albeit one which cannot be too rigidly applied. *Id.* Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness. *Id.*

The present invention is directed to a conductive roller formed from a conductive urethane composition and a metal shaft, wherein the composition is formed from polyurethane obtained by a poly-addition reaction of a polyol and polyisocyanate in a specified amount, and

the composition contains a metal salt of a bis(fluoroalkyl-sulfonyl)imide and metal salts of fluoroalkyl sulfonic acid as an organic ionic-conductive agent. Furthermore, the inventive conductive roller of the present application requires a conductive urethane composition containing hydrotalcites or zeolites as a negative ion absorbent, so that not less than 1% nor more than 20% of the organometallic salt is single-ionized. Moreover, the present urethane composition has a volume resistivity set to  $10^{6.0}$  ( $\Omega\cdot\text{cm}$ ) -  $10^{8.0}$  ( $\Omega\cdot\text{cm}$ ), and a compression set not more than 15% when said compression set is measured at 70°C for 24 hours in a permanent set testing method for rubber, vulcanized or thermoplastic, specified in JIS K6262. None of the cited references, alone or in combination, teach or suggest a conductive roller as claimed.

As evidenced by Applicants' Examples and Comparative Examples at pages 24-40 of the present Specification (see also Tables 1-3), Applicants have discovered that the addition of a metal salt of fluoroalkyl sulfonic acid as an organic ionic-conductive agent, coupled with the addition of hydrotalcites or zeolites as a negative ion absorbent so that not less than 1% nor more than 20% of the organometallic salt is single-ionized, results in a product exhibiting improved surface roughness, stain resistance properties, and image printing quality.

Applicants respectfully submit that the cited references fail to teach or suggest each and every limitation of the present invention and the advantages thereof. As correctly asserted by the Examiner, neither Vreeland '001 nor Vreeland '457 nor Gloyer '576 teach or suggest the presently claimed polyether polyol having the claimed degree of unsaturation, the presently claimed fluoroalkyl sulfonic acid salt and imide salt, or the presently claimed hydrotalcite or zeolite component. None of the seven secondary references cited by the Examiner, alone or in

combination, cure the deficiencies of the primary references. For this reason alone, this rejection is improper and should be withdrawn.

Moreover, Applicants submit that one skilled in the art would not have a proper reason or rationale to combine the cited references as proposed by the Examiner. The Examiner through improper hindsight reasoning relies on a total of ten separate references and attempts to improperly pick and choose from among these references in an attempt to arrive at the present invention. Applicants respectfully submit that there is no reason that would have prompted a person of ordinary skill in the art to combine the elements in the way the present invention does, as proposed by the Examiner.

Evidently, the cited references fail to disclose or suggest the presently claimed conductive roller. Accordingly, reconsideration and withdrawal of these rejections are respectfully requested.

### **Claims 20-21**

Claims 20-21 stand rejected under 35 U.S.C. 103(a) as being obvious over Vreeland '001 or '457 or Gloyer '576, each in view of Barksby '445 and further in view of Wen '897 or '639 or Sandlin '451 or Noh '002.

Claims 20-21 have been cancelled by way of the present amendment. Accordingly, the rejection of these claims is moot.

Reconsideration and withdrawal of this rejection are respectfully requested.

**Claim 11**

Claim 11 stands rejected under 35 USC 103(a) as being unpatentable over Vreeland '001 or '457 or Gloyer '576 (U.S. 2001/0046576) each in view of Barksby '445 and Knobel '669 and further in view of Wen '897 or '639 or Sandlin '451 or Noh '002 and further in view of Eichorst '630 or Christian '287, as applied to claims 1, 2, 7, 8 and 12-17, and further in view of Nogami '646 (USP 5,618,646) or Priebe '188 (USP 5,869,188). Applicants respectfully traverse.

As noted above, the cited references fail to teach or suggest a conductive roller formed from a conductive urethane composition and a metal shaft, wherein the composition is formed from polyurethane obtained by a poly-addition reaction of a polyol and polyisocyanate in a specified amount, and the composition contains a metal salt of a bis(fluoroalkyl-sulfonyl)imide and metal salts of fluoroalkyl sulfonic acid as an organic ionic-conductive agent, wherein the conductive urethane composition contains hydrotalcites or zeolites as a negative ion absorbent, so that not less than 1% nor more than 20% of the organometallic salt is single-ionized. Nogami '646 and Priebe '188 fail to cure these deficiencies.

Evidently, the cited references, alone or in combination, fail to render the present invention obvious. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

**Conclusion**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and objections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Andrew D. Meikle, Reg. No. 32,868 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

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